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- NEWS 2 "Ask CAS" for self-help around the clock
- NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
- NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status data from INPADOC
- NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
- NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
- NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
- NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
- NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
- NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
- NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
- NEWS 12 MAR 22 PATDPASPC - New patent database available
- NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
- NEWS 14 APR 04 EPFULL enhanced with additional patent information and new fields
- NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
  
- NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
  
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- NEWS WWW CAS World Wide Web Site (general information)

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| => file agricola caplus biosis |                  |               |
| COST IN U.S. DOLLARS           | SINCE FILE ENTRY | TOTAL SESSION |
| FULL ESTIMATED COST            | 0.21             | 0.21          |

FILE 'AGRICOLA' ENTERED AT 15:56:21 ON 07 APR 2005

FILE 'CAPLUS' ENTERED AT 15:56:21 ON 07 APR 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> s virus and beta barrel

L1 221 VIRUS AND BETA BARREL

=> s l1 and loop?

L2 54 L1 AND LOOP?

=> del 12 y

=> s l1 and plant?

L2 46 L1 AND PLANT?

=> dup rem 12

PROCESSING COMPLETED FOR L2

L3 29 DUP REM L2 (17 DUPLICATES REMOVED)

=> d 1-10 ti

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

TI Structure of foot-and-mouth disease **virus** particles

L3 ANSWER 2 OF 29 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Mapping the triphosphatase active site of baculovirus mRNA capping enzyme LEF4 and evidence for a two-metal mechanism.

L3 ANSWER 3 OF 29 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Mapping the active site of vaccinia **virus** RNA triphosphatase.

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI The structure and evolution of the major capsid protein of a large, lipid-containing DNA **virus**

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI The Crystallographic Structure of Brome Mosaic **Virus**

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chimeric **plant** viruses with mucin peptides possessing strong immunogenicity

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

TI Structure of the maize streak **virus** geminate particle

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

TI Satsuma dwarf and related viruses belong to a new lineage of **plant** picorna-like viruses

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

TI Mutational analyses of the putative calcium binding site and hinge of the turnip crinkle **virus** coat protein

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6

TI The structure of tobacco ringspot **virus**: a link in the evolution of icosahedral capsids in the picornavirus superfamily

=> d ab

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

AB A review. X-ray structures, at almost atomic resolution, of foot-and-mouth-disease **virus** (FMDV) particles from several serotypes and subtypes are now available mainly from the results obtained by the Oxford group during about the last 15 yr. FMDVs show many of the structural features generally found in picornaviruses with virions forming icosahedral shells composed of 60 copies each of four structural proteins

VP1-VP4. The disposition of the three larger proteins, VP1-VP3, follows a pseudo T=3 architecture (P=3) closely related to the one first found in small, RNA, **plant** viruses. The arrangement is possible because of the similar topol. of VP1, VP2 and VP3, which adopt the wedge-shaped eight-stranded **.beta.-barrel** fold characteristic of most RNA viruses. The chain length and conformation of VP4 is quite variable among picornaviruses, though the protein is always internal and has an N-terminal myristoyl group that in the FMDV structures remains undefined. Despite the important features in common with picornaviruses, FMDV presents some major differences that can often be related to functional or biol. peculiarities. In particular, the canyon or pit found in most picornaviruses is absent in aphthoviruses, which place the integrin cell attachment site containing the Arg-Gly-Asp (RGD) motif in the protruding, fully exposed and highly immunogenic GH loop from VP1, also called the "FMDV loop". Some flexibility seems required for the optimal biol. functionality of this loop that has always been found disordered in the crystal structures of the unperturbed virions. However, the structure of the loop has been trapped, both in crystals of reduced virions from the O serotype, and in crystals of peptide complexes with neutralizing antibodies against the C serotype. The self-contained structure of the "FMDV loop" together with its hinge flexibility and with the recent availability of the structure of the ectodomain from integrin  $\alpha\beta 3$  suggest mechanisms for cell receptor- **virus** recognition and specificity.

=> d so

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 SO Foot and Mouth Disease (2004), 77-92, A1-A3, 3 plates. Editor(s):  
 Sobrino, Francisco; Domingo, Esteban. Publisher: Horizon Bioscience,  
 Wymondham, UK.  
 CODEN: 69FYMA; ISBN: 1-904933-00-9

=> d 1-10 ti

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Structure of foot-and-mouth disease **virus** particles

L3 ANSWER 2 OF 29 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI Mapping the triphosphatase active site of baculovirus mRNA capping enzyme  
 LEF4 and evidence for a two-metal mechanism.

L3 ANSWER 3 OF 29 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI Mapping the active site of vaccinia **virus** RNA triphosphatase.

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 TI The structure and evolution of the major capsid protein of a large,  
 lipid-containing DNA **virus**

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
 TI The Crystallographic Structure of Brome Mosaic **Virus**

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Chimeric **plant** viruses with mucin peptides possessing strong  
 immunogenicity

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
 TI Structure of the maize streak **virus** geminate particle

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4  
 TI Satsuma dwarf and related viruses belong to a new lineage of **plant**  
 picorna-like viruses

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5  
 TI Mutational analyses of the putative calcium binding site and hinge of the  
 turnip crinkle **virus** coat protein

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
TI The structure of tobacco ringspot **virus**: a link in the evolution  
of icosahedral capsids in the picornavirus superfamily

=> d 11-20 ti

L3 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
TI Hepatitis Core Antigen Produced in Escherichia coli: Subunit Composition,  
Conformation Analysis, and in Vitro Capsid Assembly

L3 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI The structure of satellite panicum mosaic **virus** at 1.9 Å  
resolution

L3 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8  
TI Structures of the native and swollen forms of cowpea chlorotic mottle  
**virus** determined by x-ray crystallography and cryo-electron  
microscopy

L3 ANSWER 14 OF 29 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 9  
TI The refined three-dimensional structure of an insect **virus** at  
2.8 angstroms resolution.

L3 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10  
TI Three-dimensional structure of calicivirus

L3 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11  
TI Architecture of Physalis mottle tymovirus as probed by monoclonal  
antibodies and cross-linking studies

L3 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Three-dimensional structure of satellite tobacco mosaic **virus** at  
2.9 Å resolution

L3 ANSWER 18 OF 29 AGRICOLA Compiled and distributed by the National  
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(2005) on STN DUPLICATE 12  
TI Double-helical RNA in satellite tobacco mosaic **virus**.

L3 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 13  
TI Sequence analyses and structural predictions of double-stranded RNA  
segment S1 and VP7 from United States prototype bluetongue **virus**  
serotypes 13 and 10

L3 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14  
TI Viral cysteine proteases are homologous to the trypsin-like family of  
serine proteases: structural and functional implications

=> d 21-29 ti

L3 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI The structure of cowpea mosaic **virus** at 3.5 Å resolution

L3 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Structure and assembly of turnip crinkle **virus**. IV. Analysis  
of the coat protein gene and implications of the subunit primary structure

L3 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15  
TI Structure of an insect **virus** at 3.0 Å resolution

L3 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN

TI Recognition and interactions controlling the assemblies of **.beta**  
**. barrel** domains

L3 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Three-dimensional structure of poliovirus at 2.9 Å resolution

L3 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 16  
TI Similarities in the genomic sequence and coat protein structure of  
**plant** viruses

L3 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 17  
TI Structure of a T = 1 aggregate of alfalfa mosaic **virus** coat  
protein seen at 4.5 Å resolution

L3 ANSWER 28 OF 29 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on  
STN  
TI STRUCTURAL COMPARISONS OF SOME SMALL SPHERICAL **PLANT** VIRUSES.

L3 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Amino acid sequence of southern bean mosaic **virus** coat protein  
and its relation to the three-dimensional structure of the **virus**

=> s virus and plant? and (immuno? or antigen or epitope)  
L4 15394 VIRUS AND PLANT? AND (IMMUNO? OR ANTIGEN OR EPITOPE)

=> s l4 and coat protein  
L5 1123 L4 AND COAT PROTEIN

=> s l5 and adjuvant  
L6 6 L5 AND ADJUVANT

=> dup rem l6  
PROCESSING COMPLETED FOR L6  
L7 5 DUP REM L6 (1 DUPLICATE REMOVED)

=> d 1-5 ti

L7 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
TI DNA vaccines encoding fusion protein of desired **antigen** and  
**adjuvant** sequence of **plant** viral coat  
**protein**

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Expression, purification, and obtaining of antibodies to a recombinant  
protein of the capsid of alfalfa mosaic **virus** in the bacterial  
system Escherichia coli

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Chimeric **plant** viruses with mucin peptides possessing strong  
**immunogenicity**

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
TI Pseudomonas aeruginosa outer-membrane protein F epitopes are highly  
**immunogenic** in mice when expressed on a **plant**  
**virus**

L7 ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI Chimeric potyvirus-like particles as vaccine carriers.

=> s l4 and (mucin or muc1 or pem)  
L8 8 L4 AND (MUCIN OR MUC1 OR PEM)

=> dup rem l8  
PROCESSING COMPLETED FOR L8  
L9 8 DUP REM L8 (0 DUPLICATES REMOVED)

=> d 1-8 ti

L9 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Polyvalent protein complexes including trivalent bispecific chimeric antibodies and conjugates for diagnosis and treatment of cancer, infection, cardiological disorder and autoimmune disease

L9 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Boroprolone compound combination therapy for various diseases

L9 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Vesicles with chimeric receptors to induce a targeted T-cell response in vivo

L9 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Bioadhesive nanoparticulate compositions having cationic surface stabilizers

L9 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Methods for treating cancer

L9 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Chimeric **plant** viruses with **mucin** peptides possessing strong **immunogenicity**

L9 ANSWER 7 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI In vitro assessment of antifungal therapeutic potential of salivary histatin-5, two variants of histatin-5, and salivary **mucin** (MUC7) domain 1.

L9 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI Salivary mucins: Protective functions in relation to their diversity.

=> d ab

L9 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
AB The invention provides for a polyvalent protein complex (PPC) comprising two polypeptide chains generally arranged laterally to one another. Each polypeptide chain typically comprises 3 or 4 'v-regions', which comprise amino acid sequences capable of forming an **antigen** binding site when matched with a corresponding v-region on the opposite polypeptide chain. Up to about 6 'v-regions' can be used on each polypeptide, chain. The v-regions of each polypeptide chain are connected linearly to one another and may be connected by interspersed linking regions. When arranged in the form of the PPC, the v-regions on each polypeptide chain form individual **antigen** binding sites.

=> d so

L9 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 148 pp.  
CODEN: PIXXD2

=> d pi

L9 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2004094613   | A2   | 20041104 | WO 2004-US12662 | 20040422 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG

US 2005003403

A1

20050106

US 2004-829388

20040422

=> d d 2 ab

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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L9 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

TI Boroprolone compound combination therapy for various diseases

=> d 3 ab

L9 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

AB The invention concerns a vesicle with an inner compartment, a membrane, and an outer side, whereby the vesicle on the outer side carries at least a mol. with a first domain, which is a binding site for dendritic cells, Langerhans cells, macrophages/monocytes, enterocytes, M-cells, and B-cells and one or more antigens anchored in the membrane of the vesicle, and a second domain, which is a membrane fixed region, and the binding mol. is anchored in the membrane of the vesicle. The binding of the vesicles to the cells results in activation of the cells. The compartment contains a peptidic **antigen** which is derived from a human pathogen, tumor **antigen**, idiotypic antibody, or autoantigen. The vesicle with the **antigen** can induce or suppress Th1 or Th2 cell responses. The vesicles can comprise a liposome, micelle, aerosol, oil body or nonmammalian cell, such as a bacterial, viral, yeast, or **plant** cell. The vesicles can be used in vaccines for various diseases such as infection, cancer, and autoimmune disease.

=> d 3 pi

L9 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|  |      |          |               |          |
|--|------|----------|---------------|----------|
| -----  | ---- | -----    | -----         | -----    |
| PI EP 1447079  | A1   | 20040818 | EP 2003-3624  | 20030215 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, |      |          |               |          |
| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK         |      |          |               |          |
| EP 1407765   | A1   | 20040414 | EP 2003-22713 | 20031009 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, |      |          |               |          |
| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK         |      |          |               |          |

=> s cowpea mosaic virus and (epitope or antigen or immuno?)

L10 203 COWPEA MOSAIC VIRUS AND (EPITOPE OR ANTIGEN OR IMMUNO?)

=> s l10 and (beta barrel)

L11 1 L10 AND (BETA BARREL)

=> d ti

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chimeric plant viruses with mucin peptides possessing strong **immunogenicity**

=> s l10 and (beta or barrel)

L12 10 L10 AND (BETA OR BARREL)

=> dup rem l12

PROCESSING COMPLETED FOR L12

L13 9 DUP REM L12 (1 DUPLICATE REMOVED)

=> d 1-9 ti

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Computer systems and methods for modeling or engineering of therapeutic antibodies against cancer and viral infection

L13 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chimeric capsid proteins and uses in ligand identification and for defining crystallization conditions for heterologous proteins in the capsid

L13 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chimeric capsid proteins and uses in ligand identification and for defining common crystallization conditions for heterologous proteins in the capsid

L13 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Expression and **immunogenicity** of malaria merozoite peptides displayed on the small coat protein of chimeric **cowpea mosaic virus**

L13 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI Reduction of bladder cancer cell growth in response to hCG.**beta**. CTP37 vaccinated mouse serum

L13 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Chimeric plant viruses with mucin peptides possessing strong **immunogenicity**

L13 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Influence of three-dimensional structure on the **immunogenicity** of a peptide expressed on the surface of a plant virus

L13 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Position-dependent processing of peptides presented on the surface of **Cowpea Mosaic virus**

L13 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

TI Therapeutic and diagnostic vaccine for the treatment of microbial infections

=> d ab

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

AB Methods, computer systems, and computer program products for antibody engineering. The methods comprise computation of a neural network, a bayesian model, monte carlo algorithm, a genetic algorithm or a combination thereof, a support vector machine, or classification using a regression tree. A variant set for an antibody of interest is constructed by identifying, using a plurality of roles, a plurality of positions in the antibody of interest and, for each resp. position in the plurality of positions, substitutions for the resp. position. The plurality of positions and the substitutions for each resp. position in the plurality of positions collectively define an antibody sequence space. A variant set comprising a plurality of variants of the antibody of interest is selected. A property of all or a portion of the variants in the variant set is measured. A sequence-activity relationship is modeled between (i) one or more substitutions at one or more positions of the antibody of interest represented by the variant set and (ii) the property measured for all or the portion of the variants in the variant set. The variant set is redefined to comprise variants that include substitutions in the plurality of positions that are selected based on a function of the



sequence-activity relationship.

=> d so

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 177 pp.  
CODEN: PIXXD2

=> d pi

L13 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2005012877 | A2   | 20050210 | WO 2004-US24751 | 20040730 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:           | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |

=> s muc1 or pem

L14 6871 MUC1 OR PEM

=> s l14 and mucin

L15 1915 L14 AND MUCIN

=> s l15 and vaccine

L16 149 L15 AND VACCINE

=> s l16 and virus

L17 20 L16 AND VIRUS

=> dup rem l17

PROCESSING COMPLETED FOR L17

L18 20 DUP REM L17 (0 DUPLICATES REMOVED)

=> d 1-10 ti

L18 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI T cells recognize PD(N/T)R motif common in a variable number of tandem repeat and degenerate repeat sequences of **MUC1**

L18 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Antigen epitope attached to Ig and in conjunction with RNA for generating effector profile of T cells and activating selected subsets of antigen presenting cells

L18 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Phase I trial of antigen-specific gene therapy using a recombinant vaccinia **virus** encoding MUC-1 and IL-2 in MUC-1-positive patients with advanced prostate cancer

L18 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Galactosyl epitope-expressing **mucin** fusion proteins for vaccination

L18 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Prevention of Spontaneous Breast Carcinoma by Prophylactic Vaccination with Dendritic/Tumor Fusion Cells

L18 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Phase I immunotherapy with a modified vaccinia **virus** (MVA) expressing human **MUC1** as antigen-specific immunotherapy in patients with **MUC1**-positive advanced cancer

L18 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Immunotherapy of spontaneous mammary carcinoma with fusions of dendritic cells and **mucin** 1-positive carcinoma cells

L18 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Pharmaceutical composition for treating and preventing human tumors, which express the tumor antigen **mucin** and/or the carcinoembryonic antigen (CEA), and the use thereof

L18 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Transduction of human dendritic cells with a recombinant modified vaccinia Ankara **virus** encoding **MUC1** and IL-2

L18 ANSWER 10 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 TI Transduction of human dendritic cells with a recombinant vaccinia **virus** encoding **MUC1** and IL-2.

=> d ab

L18 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The tumor-associated antigen **MUC1** is a transmembrane glycoprotein, which is overexpressed in human carcinomas. Peptide epitopes, containing the PDTR fragment from the variable number of tandem repeat (VNTR) domains of **MUC1** have been immunodominant in T-cell and B-cell responses. However, little is known about the immunogenicity and specificity of T-cell epitopes from other regions of **MUC1** that may also participate in immune responses against tumors. In this study, the combination of immunoinformatics, mol. modeling and a **vaccine** adjuvant strategy were used to predict and describe a novel T-cell epitope, SAPDNRPAL, located within the degenerate tandem repeat of **MUC1**. This peptide possesses structural similarity to both VNTR-derived SAPDTRPAP and Sendai **virus** peptide FAPGNYPAL, which are known to induce cytotoxic T lymphocytes (CTL). The authors found that SAPDNRPAL had a higher affinity for mouse H-Db, H-2Kb and human HLA-A2 mols. than SAPDTRPAP. A chimeric peptide (CP) containing SAPDNRPAL and an adjuvant C5a-derived decapeptide induced epitope-specific type 1 T cells in human **MUC1** transgenic mice (ELISPOT). Mice that received dendritic cells (DC) pulsed with the CP or a 25-mer peptide containing the SAPDNRPAL sequence showed increased frequencies of SAPDNRPAL- and SAPDTRPAP-specific interferon- $\gamma$  producing T cells. PDTR-specific antibody 214D4 reacted with both SAPDNRPAL and SAPDTRPAP (ELISA). Altogether, the data suggest that the degenerate **MUC1** repeat sequence contains the immunogenic T-cell epitope SAPDNRPAL, which is cross-reactive with the VNTR-derived peptide SAPDTRPAP. The authors suggest that the use of immunogenic PDNR-containing epitope(s) in **vaccine** strategies could be beneficial for developing increased, PD(N/T)R motif-specific T-cell responses against tumors expressing **MUC1**.

=> d so

L18 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 SO International Immunopharmacology (2005), 5(2), 315-330  
 CODEN: IINMBA; ISSN: 1567-5769

=> d 3 ab

L18 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

AB MUC-1 is overexpressed on many tumor cells. In addition, aberrant glycosylation of MUC-1 on human tumors leads to exposure of cryptic peptide epitopes that play a role in tumor immunity. As such, it has been identified as a potential target for immunotherapy. The purpose of this phase 1 clin. trial was to determine the maximum tolerated dose, safety of a multiple-dose regimen, and the immunol. effect of vaccinia **virus** expressing MUC-1 and IL-2 genes (VV/MUC-1/IL-2) in patients with advanced prostate cancer. Five + 105, 5 + 106, and 5 + 107 plaque-forming units (pfu) of vaccinia viruses were used in the dose-escalating study. Viruses were given via i.m. injection, and clin. response and immune function modulation were analyzed. No grade 3 or 4 toxicity was observed. Objective clin. response was observed after the fourth injection (0.3 ng/mL) in only one patient who received an intermediate dose of **virus**. Systemic immune modulation in this patient included (1) upregulation of IL-2 (CD25) and T cell (TcR  $\alpha\beta$ ) receptors, (2) increase in the CD4/CD8 ratio (2.5-fold) (3) augmentation of T-helper type 1 cell (TH1) (interferon- $\gamma$  and tumor necrosis factor- $\alpha$ ) but not TH2 (IL-4) cytokine mRNA expression, (4) induction of natural killer cell activity and MHC independent MUC-1 specific cytotoxic T-cell activity, and (5) normalization of mRNA expression of T-cell-associated signal transduction mol's. TcR- $\zeta$  and p56lck. These results suggest that VV/MUC-1/IL-2 gene therapy with a maximum tolerated dose of 5 + 107 pfu is safe and well tolerated.

=> d 3 so

L18 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
SO Journal of Immunotherapy (2004), 27(3), 240-253  
CODEN: JOIMF8; ISSN: 1524-9557

=> s ((bendig m?) or (bending, m?))/au

L19 165 ((BENDIG M?) OR (BENDING, M?))/AU

=> s l19 and virus and (epitope or antigen or immuno?)

L20 10 L19 AND VIRUS AND (EPITOPE OR ANTIGEN OR IMMUNO?)

=> dup rem l20

PROCESSING COMPLETED FOR L20

L21 6 DUP REM L20 (4 DUPLICATES REMOVED)

=> d 1-6 ti

L21 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Chimeric plant viruses with mucin peptides possessing strong  
**immunogenicity**

L21 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
TI Inactivated recombinant plant **virus** protects dogs from a lethal  
challenge with canine parvovirus

L21 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 2

TI A chimaeric plant **virus** vaccine protects mice against a  
bacterial infection.

L21 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Isolation of tumor cell-specific single-chain scFvs from immunized mice  
using phage-antibody libraries and the re-construction of whole antibodies  
from these antibody fragments

L21 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
TI The humanization of mouse monoclonal antibodies by CDR-grafting: Examples  
with antiviral and antitumor cell antibodies

L21 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
TI Viable deletion mutant in the medium and large T-antigen-coding  
sequences of the polyoma virus genome

=> d 1-6 so

L21 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 63 pp.  
CODEN: PIXXD2

L21 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
SO Vaccine (2001), 19(27), 3661-3670  
CODEN: VACCDE; ISSN: 0264-410X

L21 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National  
Agricultural Library of the Department of Agriculture of the United States  
of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 2  
SO Microbiology, Aug 1999. Vol. 145, No. pt.8. p. 2061-2067  
Publisher: Reading, U.K. : Society for General Microbiology, c1994-  
CODEN: MROBEO; ISSN: 1350-0872

L21 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
SO Conf. Ind. Immunol., Two-Day Symp., 2nd (1994), 5-7 Publisher: Inst. Chem.  
Eng., Rugby, UK.  
CODEN: 60NTAU

L21 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
SO Monoclonal Antibodies 2 (1993), 119-40. Editor(s): Epenetos, Agamemnon A.  
Publisher: Chapman and Hall, London, UK.  
CODEN: 59CLAZ

L21 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
SO Journal of Virology (1980), 33(3), 1215-20  
CODEN: JOVIAM; ISSN: 0022-538X

=> d pi

L21 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2001018199 | A1   | 20010315 | WO 2000-GB3500  | 20000911 |
| WO 2001018199 | C2   | 20020906 |                 |          |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| EP 1214410    | A1   | 20020619 | EP 2000-958882  | 20000911 |
| R:            | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL   |          |                 |          |

=> d ab

L21 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Mucin peptide epitopes are inserted into the coat protein of a plant virus (e.g. a comovirus such as cowpea mosaic virus) having a  $\beta$ -barrel structure at an immunogenically effective site, such as in a loop connecting  $\beta$ -sheets or at/near the C-terminus. The resulting chimeric virus particles are extremely immunogenic, giving better results than KLH

conjugation and not requiring the addition of exogenous adjuvant. They are effective at mucosal surfaces, particularly when administered intranasally, and induce antibodies to tumor antigens.

=> d 2 ab

L21 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

AB A vaccine based upon a recombinant plant **virus** (CPMV-PARVO1), displaying a peptide derived from the VP2 capsid protein of canine parvovirus (CPV), has previously been described. To date, studies with the vaccine have utilized viable plant chimeric particles (CVPs). In this study, CPMV-PARVO1 was inactivated by UV treatment to remove the possibility of replication of the recombinant plant **virus** in a plant host after manufacture of the vaccine. We show that the inactivated CVP is able to protect dogs from a lethal challenge with CPV following parenteral immunization with the vaccine. Dogs immunized with the inactivated CPMV-PARVO1 in adjuvant displayed no clin. signs of disease and shedding of CPV in feces was limited following CPV challenge. All immunized dogs elicited high titers of peptide-specific antibody, which neutralized CPV in vitro. Levels of protection, **virus** shedding and VP2-specific antibody were comparable to those seen in dogs immunized with the same VP2- peptide coupled to keyhole limpet hemocyanin (KLH). Since plant **virus**-derived vaccines have the potential for cost-effective manufacture and are not known to replicate in mammalian cells, they represent a viable alternative to current replicating vaccine vectors for development of both human and veterinary vaccines.

=> d 3 ab

L21 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2

AB The plant **virus** cowpea mosaic **virus** (CPMV) is an efficient carrier of foreign peptides for the generation of strong humoral immune responses. Peptides derived from both viruses and bacteria are strongly **immunogenic** when displayed on the surface of CPMV and elicit high titres of peptide-specific antibody. However, the protective effects of antibodies generated using bacterial epitopes in this system have yet to be demonstrated. In this study the ability of chimaeric **virus** particles (CVPs) to afford protection against bacterial infection was assessed. Immunization of outbred mice with CPMV expressing a peptide derived from outer-membrane protein F of *Pseudomonas aeruginosa* (CPMV-PAE5) generated high titres of *P. aeruginosa*-specific IgG that opsonized the bacteria for phagocytosis by human neutrophils and afforded protection upon challenge with two different **immunotypes** of *P. aeruginosa* in a model of chronic pulmonary infection. When examined 8 d after challenge, CVP-immunized mice had fewer severe lung lesions and fewer bacteria in their lungs compared to mice immunized with wild-type **virus**. Different levels of protection were seen with CPMV-PAE5 when Freund's or alum adjuvants were used. These studies highlight the ability of CVPs to generate protective immunity against infectious disease agents.

=> d 3 au

L21 ANSWER 3 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2

AU Brennan, F.R.; Gilleland, L.B.; Staczek, J.; Bendig, M.M.; Hamilton, W.D.O.; Gilleland, H.E. Jr

=> d 4 ab

L21 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Enhanced expression of epidermal growth factor receptor (EGFR) occurs on a variety of malignant tissues thus making ant-EGFR antibodies possible agents for the diagnosis and therapy of human tumors. Standard hybridoma technol. has been used successfully to isolate anti-EGFR antibodies from immunized mice and rats. This report demonstrates that phage-antibody libraries are an alternative, and more versatile, method for isolating antibodies from immunized mice. Anti-EGFR antibodies were isolated from phage-antibody libraries constructed not only from the spleen of an immunized mouse but also from the draining lymph node of an immunized mouse and from in vitro immunized mouse cells. Two Fv fragment isolated from the phage-antibody libraries were engineered to create partially humanized whole antibody mols.

=> d 5 ab

L21 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
AB A review with 43 refs. A general description is given of how reshaped human antibodies are designed and constructed at the MRC Collaborative Center and two examples of reshaped human antibodies are presented. The first set of reshaped human antibodies was based on a mouse monoclonal antibody that has neutralizing activity against human **immunodeficiency virus** (HIV). The second set of reshaped human antibodies was based on a mouse monoclonal antibody against human epidermal growth factor receptor (EGFR), an **antigen** that is overexposed on certain types of tumor cells.

=> d 6 ab

L21 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
AB A polyoma **virus** mutant that maps in the early region between the known hr-t and ts-a mutants was isolated. Its 66-base-pair deletion resulted in structural changes in both medium and large T-antigens but caused no substantial alterations in viral replication or cell transformation.

=> s ((jones, t?) or (jones t?))/au  
L22 7248 ((JONES, T?) OR (JONES T?))/AU

=> s l22 and virus and (antigen or epitope or immuno?)  
L23 157 L22 AND VIRUS AND (ANTIGEN OR EPITOPE OR IMMUNO?)

=> s l23 and plant?  
L24 23 L23 AND PLANT?

=> dup rem l24  
PROCESSING COMPLETED FOR L24  
L25 13 DUP REM L24 (10 DUPLICATES REMOVED)

=> d 1-13 ti

L25 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Viral particles presenting hydrophobic epitopes on the inside of the viral capsid and their use in vaccines

L25 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Chimeric **plant** viruses with mucin peptides possessing strong **immunogenicity**

L25 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
TI Inactivated recombinant **plant virus** protects dogs from a lethal challenge with canine parvovirus

L25 ANSWER 4 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI Infrequent genetic exchange and recombination in the mitochondrial genome of *Candida albicans*.

L25 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
TI Cowpea mosaic **virus** as a vaccine carrier of heterologous antigens

L25 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
TI Properties of a neutralizing antibody that recognizes a conformational form of **epitope** ERDRD in the gp41 C-terminal tail of human **immunodeficiency virus** type 1

L25 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4  
TI **Immunogenicity** of peptides derived from a fibronectin-binding protein of *S. aureus* expressed on two different **plant** viruses

L25 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5  
TI Analysis of the ability of five adjuvants to enhance immune responses to a chimeric **plant virus** displaying an HIV-1 peptide

L25 ANSWER 9 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI Chimeric **plant virus** particles administered nasally or orally induce systemic and mucosal immune response in mice.

L25 ANSWER 10 OF 13 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 6  
TI *Pseudomonas aeruginosa* outer-membrane protein F epitopes are highly **immunogenic** in mice when expressed on a **plant virus**.

L25 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
TI Intranasal immunization with a **plant virus** expressing a peptide from HIV-1 gp41 stimulates better mucosal and systemic HIV-1-specific IgA and IgG than oral immunization

L25 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8  
TI **Plant**-derived vaccine protects target animals against a viral disease

L25 ANSWER 13 OF 13 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 9  
TI The detection of beet western yellows **virus** and beet mild yellowing **virus** in crop **plants** using the polymerase chain reaction.

=> d pi

|     |   |        |                |                 |          |
|-----|---|--------|----------------|-----------------|----------|
| L25 | ANSWER 1 OF 13  | CAPLUS | COPYRIGHT 2005 | ACS on STN      |          |
|     | PATENT NO.  | KIND   | DATE           | APPLICATION NO. | DATE     |
|     | -----   | ----   | -----          | -----           | -----    |
| PI  | WO 2001027282   | A1     | 20010419       | WO 2000-US28430 | 20001013 |
|     | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |        |                |                 |          |
|     | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |        |                |                 |          |
|     | CA 2387626  | AA     | 20010419       | CA 2000-2387626 | 20001013 |
|     | BR 2000014861   | A      | 20020716       | BR 2000-14861   | 20001013 |
|     | EP 1235910  | A1     | 20020904       | EP 2000-972153  | 20001013 |



R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 JP 2003534771 T2 20031125 JP 2001-530485 20001013  
 HR 2000000702 A1 20020430 HR 2000-702 20001019  
 ZA 2002002815 A 20030529 ZA 2002-2815 20020410

=> d 2 pi

L25 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
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 PI WO 2001018199 A1 20010315 WO 2000-GB3500 20000911  
 WO 2001018199 C2 20020906  
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1214410 A1 20020619 EP 2000-958882 20000911  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL

=> d 3 ab

L25 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 AB A vaccine based upon a recombinant **plant virus**  
 (CPMV-PARVO1), displaying a peptide derived from the VP2 capsid protein of  
 canine parvovirus (CPV), has previously been described. To date, studies  
 with the vaccine have utilized viable **plant** chimeric particles  
 (CVPs). In this study, CPMV-PARVO1 was inactivated by UV treatment to  
 remove the possibility of replication of the recombinant **plant**  
**virus** in a **plant** host after manufacture of the vaccine. We  
 show that the inactivated CVP is able to protect dogs from a lethal  
 challenge with CPV following parenteral immunization with the vaccine.  
 Dogs immunized with the inactivated CPMV-PARVO1 in adjuvant displayed no  
 clin. signs of disease and shedding of CPV in feces was limited following  
 CPV challenge. All immunized dogs elicited high titers of  
 peptide-specific antibody, which neutralized CPV in vitro. Levels of  
 protection, **virus** shedding and VP2-specific antibody were  
 comparable to those seen in dogs immunized with the same VP2- peptide  
 coupled to keyhole limpet hemocyanin (KLH). Since **plant**  
**virus**-derived vaccines have the potential for cost-effective  
 manufacture and are not known to replicate in mammalian cells, they represent a  
 viable alternative to current replicating vaccine vectors for development  
 of both human and veterinary vaccines.

=> d 3 sso

'SSO' IS NOT A VALID FORMAT  
 In a multiframe environment, a format can only be used if it is valid  
 in at least one of the files. Refer to file specific help messages  
 or the STNGUIDE file for information on formats available in  
 individual files.  
 REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):so

L25 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 SO Vaccine (2001), 19(27), 3661-3670  
 CODEN: VACCDE; ISSN: 0264-410X

=> d 5 ab



L25 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

AB A review. The **plant virus**, cowpea mosaic **virus** (CPMV), has been developed as an expression and presentation system to display antigenic epitopes derived from a number of vaccine targets including infectious disease agents and tumors. These chimeric **virus** particles (CVPs) could represent a cost-effective and safe alternative to live replicating **virus** and bacterial vaccines. A number of CVPs have now been generated and their **immunogenicity** examined in a number of animal species. This review details the humoral and cellular immune responses generated by these CVPs following both parenteral and mucosal delivery and highlights the potential of CVPs to elicit protective immunity from both viral and bacterial infection.

=> d 5 so

L25 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

SO Molecular Biotechnology (2001), 17(1), 15-26  
CODEN: MLBOEO; ISSN: 1073-6085

=> d 8 ab

L25 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

AB The ability of five different adjuvants (alum, complete Freund's adjuvant, Quil A, AdjuPrime and Ribi) to stimulate humoral and T-cell mediated immune responses against a purified chimeric **virus** particle was investigated. Each adjuvant was administered s.c. to adult mice together with 10 µg of wild type (wt) cowpea mosaic **virus** (CPMV) or a chimeric CPMV displaying the HIV-1 gp41 peptide, residues 731-752. All preps. elicited strong antibody responses to CPMV, but Quil A elicited the highest and most consistent responses to the HIV-1 peptide. This finding was reflected in both ELISA titers with immobilized peptide and in HIV-1-neutralizing antibody. In addition Quil A was also the only adjuvant to stimulate an in vitro proliferative T-cell response. Surprisingly with all adjuvant formulations a predominately IgG2a anti-gp41 peptide response was observed, indicating a type 1 T-helper cell-like response. Furthermore, the efficiency of the CPMV display system was demonstrated by its ability to induce good levels of peptide specific antibody in the absence of any adjuvant.

=> d 8 so

L25 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

SO Vaccine (1999), 17(11-12), 1359-1368  
CODEN: VACCDE; ISSN: 0264-410X

=> d 9 ab

L25 ANSWER 9 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

AB The humoral immune responses to the D2 peptide of fibronectin-binding protein B (FnBP) of Staphylococcus aureus, expressed on the **plant virus** cowpea mosaic **virus** (CPMV), were evaluated after mucosal delivery to mice. Intranasal immunization of these chimeric **virus** particles (CVPs), either alone or in the presence of ISCOM matrix, primed CPMV-specific T cells and generated high titers of CPMV- and FnBP-specific **immunoglobulin G** (IgG) in sera. Furthermore, CPMV- and FnBP-specific IgA and IgG could also be detected in the bronchial, intestinal, and vaginal lavage fluids, highlighting the ability of CVPs to generate antibody at distant mucosal sites. IgG2a and IgG2b were the dominant IgG subclasses in sera to both CPMV and FnBP, demonstrating a bias in the response toward the T helper 1 type. The sera completely inhibited the binding of human fibronectin to the S. aureus FnBP. Oral immunization of the CVPs also generated CPMV- and FnBP-specific serum IgG; however, these titers were significantly lower and more variable than those generated by the intranasal route, and

FnBP-specific intestinal IgA was undetectable. Neither the ISCOM matrix nor cholera toxin enhanced these responses. These studies demonstrate for the first time that recombinant **plant** viruses have potential as mucosal vaccines without the requirement for adjuvant and that the nasal route is most effective for the delivery of these nonreplicating particles.

=> d 9 so

L25 ANSWER 9 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
SO Journal of Virology, (Feb., 1999) Vol. 73, No. 2, pp. 930-938. print.  
CODEN: JOVIAM. ISSN: 0022-538X.

=> s 125 and (beta or barrel)

L26 2 L25 AND (BETA OR BARREL)

=> dup rem 126

PROCESSING COMPLETED FOR L26

L27 2 DUP REM L26 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L27 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Chimeric **plant** viruses with mucin peptides possessing strong  
**immunogenicity**

L27 ANSWER 2 OF 2 AGRICOLA Compiled and distributed by the National  
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(2005) on STN

TI The detection of beet western yellows **virus** and beet mild  
yellowing **virus** in crop **plants** using the polymerase  
chain reaction.

=> d 1-2 so

L27 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
SO PCT Int. Appl., 63 pp.  
CODEN: PIXXD2.

L27 ANSWER 2 OF 2 AGRICOLA Compiled and distributed by the National  
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(2005) on STN

SO Journal of virological methods, Dec 1991. Vol. 35, No. 3. p. 287-296  
Publisher: Amsterdam : Elsevier Science Publishers.  
CODEN: JVMEDH; ISSN: 0166-0934

=> d pi

L27 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2001018199 | A1   | 20010315 | WO 2000-GB3500  | 20000911 |
| WO 2001018199 | C2   | 20020906 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1214410                    A1        20020619        EP 2000-958882                    20000911  
R:    AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
      IE, SI, LT, LV, FI, RO, MK, CY, AL

=> d 2 ab

- L27 ANSWER 2 OF 2 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN
- AB Oligonucleotide primers were synthesised corresponding to conserved sequences between three isolates of beet western yellows **virus** (BWYV), flanking a 913 base fragment of BWYV genomic RNA. Using the polymerase chain reaction (PCR), these primers successfully amplified the target fragment in total RNA extracts from two oilseed rape **plants** infected with different isolates of BWYV. The PCR products were readily detected by staining with ethidium bromide following agarose gel electrophoresis, but the limit of detection could be increased further by Southern blotting. However, three isolates of beet mild yellowing **virus** (BMV) in sugar beet did not give a signal which could be detected by ethidium bromide staining, although the target fragment could be detected by Southern blotting. The primers used have the potential to detect BWYV in crops with far greater sensitivity than enzyme-linked **immunosorbent** assay or nucleic acid hybridisation (dot-blotting) and may be capable of distinguishing between BWYV and BMV. The application of PCR to detection and distinction of luteoviruses in general is discussed.

=> s ((hellendoorn, k?) or (hellendoorn k?))/au  
L28                    19 ((HELLENDOORN, K?) OR (HELLENDOORN K?))/AU

=> dup rem l28  
PROCESSING COMPLETED FOR L28  
L29                    12 DUP REM L28 (7 DUPLICATES REMOVED)

=> d 1-12 ti

- L29 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Tumour necrosis factor receptor molecules with reduced immunogenicity and uses thereof in tumor necrosis factor-mediated diseases
- L29 ANSWER 2 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
TI Improving the immunogenicity profile of therapeutic antibodies and proteins.
- L29 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Carboxypeptidase G2: mapping of T-cell epitopes and engineering of reduced immunogenicity
- L29 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Modified anti-human TNF $\alpha$  antibodies with reduced T cell epitope for treating Crohn's disease, rheumatoid arthritis and endotoxic or cardiovascular shock
- L29 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Methods for reducing immunogenicity of polypeptides
- L29 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Mass spectrometric analysis of peptides presented by MHC molecules
- L29 ANSWER 7 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN  
DUPLICATE 1  
TI Protonation of non-Watson-Crick base pairs and encapsidation of turnip yellow mosaic virus RNA.

L29 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Viral particles presenting hydrophobic epitopes on the inside of the viral capsid and their use in vaccines

L29 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Chimeric plant viruses with mucin peptides possessing strong immunogenicity

L29 ANSWER 10 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2  
 TI A functional role for the conserved protonatable hairpins in the 5'untranslated region of turnip yellow mosaic virus RNA.

L29 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
 TI Protonatable hairpins are conserved in the 5'-untranslated region of tymovirus RNAs

L29 ANSWER 12 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4  
 TI Secondary structure model of the coat protein gene of turnip yellow mosaic virus RNA: long, C-rich, single-stranded regions.

=> d 8 ab

L29 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The present invention relates to the expression of peptides on viral particles, and more particularly to the expression of peptides on the interior of the viral capsid. Methods are described for modifying viruses so that exogenous epitopes are expressed on the interior of the viral capsid. Viruses that can be modified include (+) stranded RNA viruses, especially plant (+) stranded RNA viruses such as the cowpea mosaic virus. Internal expression is especially useful for the expression of hydrophobic epitopes. The modified viral particles also find use as vaccines and as such are capable of eliciting an immune response. A specific case using the capsid protein VP-S of cowpea mosaic virus with epitopes inserted near the N-terminus (amino acids 10-12) is demonstrated. Optimization of the expression and presentation system is described. Exact positioning of the epitope in the capsid protein is dictated by its effect on protein structure and the ability of the virus to be infective in its host plant. Methods of constructing virus carrying two epitopes, one internal and one external, are also described. Virulence can be maintained or restored by second-site mutations. Mutations are in the VP-S gene or the gene for the other capsid protein VP-L.

=> d 8 pi

| L29 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN |   |      |          |                 |          |
|---|---|------|----------|-----------------|----------|
|   | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|   | -----   | ---- | -----    | -----           | -----    |
| PI  | WO 2001027282   | A1   | 20010419 | WO 2000-US28430 | 20001013 |
|   | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
|   | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
|   | CA 2387626  | AA   | 20010419 | CA 2000-2387626 | 20001013 |
|   | BR 2000014861   | A    | 20020716 | BR 2000-14861   | 20001013 |

|   |    |          |                |          |
|---|----|----------|----------------|----------|
| EP 1235910  | A1 | 20020904 | EP 2000-972153 | 20001013 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL |    |          |                |          |
| JP 2003534771   | T2 | 20031125 | JP 2001-530485 | 20001013 |
| HR 2000000702   | A1 | 20020430 | HR 2000-702    | 20001019 |
| ZA 2002002815   | A  | 20030529 | ZA 2002-2815   | 20020410 |

=> d 9 pi

L29 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| -----   | ---- | -----    | -----           | -----    |
| PI WO 2001018199  | A1   | 20010315 | WO 2000-GB3500  | 20000911 |
| WO 2001018199   | C2   | 20020906 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| EP 1214410  | A1   | 20020619 | EP 2000-958882  | 20000911 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL   |      |          |                 |          |

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DATE: Thursday, April 07, 2005

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*DB=PGPB,USPT; PLUR=YES; OP=ADJ*

|                          |    |                           |      |
|--------------------------|----|---------------------------|------|
| <input type="checkbox"/> | L7 | pem and plant virus       | 18   |
| <input type="checkbox"/> | L6 | L5 and plant virus        | 19   |
| <input type="checkbox"/> | L5 | muc1                      | 761  |
| <input type="checkbox"/> | L4 | L3 and coat protein [clm] | 41   |
| <input type="checkbox"/> | L3 | L2 and coat protein       | 1339 |
| <input type="checkbox"/> | L2 | L1 and immuno\$           | 1951 |
| <input type="checkbox"/> | L1 | plant virus and epitope   | 1972 |

END OF SEARCH HISTORY